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SOME CONSIDERATIONS WITH REGARD TO THE PATHOLOGY AND
TREATMENT OF POTT'S DISEASE OF THE SPINE.

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[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

THE treatment of carious disease of the spine is a subject which of late years has undergone great changes, and has become much more interesting than it formerly was. We may now undertake to treat a case of Pott's disease, not feeling that we have set ourselves to a hopeless and discouraging task; but, on the contrary, that we shall probably be able to give the greatest relief to the patient, and, in most cases, to arrest the further progress of the disease.

The following case, though meagre in details, will nevertheless be found to illustrate some important points to which I wish to direct attention.

A. T., aged 5 years, came under my care in March, 1867. She was of a delicate appearance, and very nervous and excitable. She had been, and then was, under the care of Dr. Charles F. Taylor, of New York, with whom I first saw her. I may here say, that the reason why I was placed in charge of the case was, because it was thought necessary to provide more constant medical attendance than could be given by Dr. Taylor, who saw the child only at long intervals. Unfortunately, I have but few notes of this case, and know little of the previous history, except that the disease had been observed some two years before, and no marked improvement had taken place till the child was placed under Dr. Taylor's care, who applied an apparatus to be described presently. There was an angular projection in the lower dorsal region, of which a model in card-board had been taken by Dr. Taylor when he first saw the child. By applying this model to the projection, I discovered that considerable diminution had taken place in it.

This patient had previously been treated by means of the "spiral spring corset," a very cumbersome apparatus, which possessed the dis-

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advantage (in common with many other forms of apparatus) of compressing the thorax, thus interfering with the respiration.

When I first saw the case Dr. Taylor's instrument was in use, and another one, similar in form, but somewhat differently curved, was applied by Dr. T. in my presence; it being better adapted to the state of the disease at that time.

The treatment in this case consisted in the use of the apparatus during the day, and the internal administration of cod-liver oil, preparations of iron and bromide of potassium, according to circumstances. Good diet was also advised, and plenty of fresh air; the child not being allowed to walk much, but being left for hours together, on a sofa, out-doors, in the sun. Residence in the country made this treatment the more feasible.

From time to time I made slight alterations in the apparatus, and the child gradually improved in health; and at the end of some eight months I lost sight of the case. I have since learned, however, that everything was progressing favorably.

Before describing Dr. Taylor's apparatus, I wish to say a few words about the pathology and treatment of this disease. It consists, practically, of a loss of substance in the bodies of certain vertebræ. Usually several are affected—at once, or consecutively. The spine is the main support of the body in the erect position, and the weight of the body falls on the bodies of the vertebræ with the intervertebral cartilages. The spinous, transverse, and articulating processes serve only to limit and direct the movements of the spine, and for the attachment of muscles and ligaments.

Now, as Dr. Taylor says in his small work on Pott's disease of the spine, if we take a straight, flexible rod, one end of which is made fast, and apply force at the other end, the result is that the rod comes to describe a regular curve. But if the rod be partly cut through in the middle, the result is, when force is applied, that it bends excessively at this point, or breaks altogether. So with the spine; when a healthy person stoops forward, the whole spine describes a curve, the cervical and lumbar regions bending more than the dorsal. But if the attempt be made by a person suffering from Pott's disease, a great force is brought to bear at the weakest place, viz., the seat of the disease. Thus, a sudden crushing together of the vertebræ may occur, causing paralysis; or, what is more probable, the diseased surfaces may take on fresh inflammatory action, and the disease increase.

The etiology of this disease deserves attention. We are told by almost all authorities, that it is essentially a scrofulous disease; that it never occurs except in unhealthy, under-fed children, or in those of weakly or syphilitic parents. And in proof of this, our attention is directed to the anæmic appearance of such children, and to various other circumstances.

Unquestionably, weakly children are more liable to this, as to

every disease, than those who are robust; and there can be no doubt that insufficient nourishment and generally bad hygienic conditions, do act as predisposing causes. But I am, on the whole, disposed to agree with Dr. Bauer, of Brooklyn, N. Y., who, in his "Lectures on Orthopædic Surgery," maintains that this generally received explanation is inapplicable to many, if not to most cases. Dr. Bauer thinks that, in many cases, a history of some sort of local injury is to be obtained; and that in others such an injury has been sustained, though it may have escaped notice at the time, as is frequently the case with injuries which children receive while at play; especially since no symptoms of disease of the vertebræ may appear for a considerable time. He says, moreover, not without reason, that it is very easy for a practitioner, when he sees a child suffering from advanced carious disease of the spine, attended with abscesses, perhaps, and great constitutional disturbance, brought on by *this very* disease, to make out a case of scrofulous affection; whereas, in many such cases it will be found, on accurate inquiry, that the children were previously as healthy, in all respects, as other children, up to the time of the fall or injury which brought about all this local and afterwards constitutional disturbance. Dr. Bauer also cites the case of necrosis of other bones following injury, in proof of his position.

I must say that these views seem to me very reasonable; although we all have certainly been taught to look on these cases as scrofulous (so called), and although I am not aware that Dr. Bauer, or any one else, has brought forward enough facts to prove the truth of these assumptions.

As to the treatment of Pott's disease, it may be divided into constitutional and local. Whether the scrofulous pathology be correct or not, one thing is very certain, viz., that in almost all cases debility is a prominent symptom, whether it was present before, or appeared subsequently to the external manifestation of the disease. Therefore, a tonic plan of treatment is indicated—as, in fact, in nearly all other diseases—the use of milk diet, the administration of iron or cod-liver oil, and a variety of hygienic treatment which need not here be specified. The local treatment, however, I consider as infinitely more important than the constitutional, since the local disease is liable to produce the greatest constitutional disturbance. This granted, it is plain that if it be possible to lessen the causes of the various symptoms, such action is much more reasonable than to endeavor to support the system under the strain placed upon it; just as in a case of a foreign body in the eye, it is more reasonable to remove the offending substance than to endeavor to combat the resulting inflammation.

Now, the local treatment usually laid down in books on surgery, consists chiefly of rest in bed, on the back, and of constant and painful counter-irritation on either side of the spinous processes of the affected vertebræ, by means of issues, setons, the actual cautery, &c.

When in Berlin, I assisted, at different times, both Prof. Langen-

beck and Dr. Berend—who are both writers on orthopædic surgery, and are, probably, the best authorities on these matters in that city, and perhaps on the continent of Europe—in the operation of dividing the skin and putting in peas as issues, on either side of the spine. Most of us, also, have, in our student days at least, seen the actual cautery repeatedly used in these cases for the same purpose.

I do not hesitate to condemn, in the most unqualified manner, all such practices; and I approve entirely of the principle which, if I am not mistaken, originated in this country, of applying support to the spine, and thus removing the source of irritation: to wit, the continual pressure and friction of the diseased surfaces on each other. In this I agree with Drs. Taylor, Davis, Lee, Prince and others of this country, and also with Mr. W. Adams, of London, whose work, I may here mention, on "*Curvatures of the Spine*," and especially that portion on "*Lateral Curvature*," deserves the careful perusal of every surgeon.

One word with regard to the recumbent position on the back. There can be no doubt that this position is often an invaluable adjunct to other treatment; but if long continued, the general health will surely suffer, and thus an unfavorable influence be exerted on the local disease. It must also not be forgotten that, in the supine position, the spine is not, after all, in such a remarkably good condition for the arrest of the disease; for the frequent movements of the patient, the rising to pass the evacuations, and many other things, do certainly cause a degree of pressure and friction anything but salutary.

The treatment of this disease by local support is fast becoming, in this country at least, the rule of practice; and the immediate relief to the symptoms and the remarkably successful results justify the commendation which it is receiving.

Dr. Taylor's apparatus consists of two firm uprights of iron, curved to suit each case, which pass upwards from a pelvic belt, to which they are attached, one on each side of the spine; and are connected, above, by a cross-piece, also of iron, to each other and to shoulder straps. Then a pad is attached to each upright, and placed just below the angular projection. The pelvic belt does not encircle the body, but is open in front; and the aperture is filled by a wide band or apron, which serves to support the abdomen, which, in these cases, is frequently prominent. When the apparatus is adjusted, pressure is made at, or just below, the seat of disease, and counter-pressure against the abdomen and shoulders. Thus, as it were, a splint is applied to the spine, as to a broken limb. Of course, ordinary care must be taken to avoid excoriations at the points of pressure. The above is not a complete description of Dr. Taylor's apparatus, but gives the chief points. The instrument has the advantages of giving good support, and of not interfering with the respiration. It is also light, and not complicated. I am, how-

ever, now using an apparatus made on similar principles, but heavier, and made with crutches. I am disposed to think that the crutches are of essential service in taking off the shock of a fall or leap; and although the apparatus is thus made more cumbersome than that of Dr. Taylor, it is still not excessively heavy by any means; and since it is not so easy for a child to perform all sorts of manœuvres while wearing it, as he might with the other instrument, it would seem to possess the advantage of insuring less movement to the spine. By means of an apparatus constructed on this simple and obvious principle, one great source of irritation is removed, and thus an opportunity is afforded for nature to cure the disease. Of course, where there is a loss of substance there must be an angular projection; but, by the above means, this loss is reduced to a minimum, and it is even possible that new bone may be thrown out, and thus the gap be partially filled. At any rate, compensatory curves are formed above, and especially below the seat of the disease; so that the resulting deformity is, in most cases, scarcely perceptible when the patient is dressed. I have now several cases of Pott's disease, in which the above-described apparatus has been applied; and in all of them immediate relief to the symptoms has been observed, and no complaint has been made of any pain or discomfort caused by the instrument. If the disease be situated in the uppermost dorsal, or in the cervical vertebræ, unusual difficulties must be encountered; but even in such cases the greatest benefit is produced by the use of a modification of the apparatus described, the principle in all cases being the same. I may here say that the instruments which I have used have been very skilfully constructed by Messrs. Leach & Greene, of this city.

A form of apparatus which has been much used, and known as the "spiral spring corset," needs a moment's attention. The peculiarity of the apparatus is, that while downward pressure is prevented, lateral movements are freely permitted. But, besides the objection that the instrument is made in the form of a corset, and encircles the thorax, and thus impedes respiration, it will be seen that the principle of its construction is quite opposed to that of the instruments just described. Its only advantage seems to be that a portion of the superincumbent weight of the body is removed; but much remains, and friction of the diseased surfaces on each other is not in the least prevented. In short, it seems to me that it, as well as all other instruments made on similar principles, is altogether useless as compared with those which act as a splint to the spine.

It may, however, be objected to this principle of applying a *splint*, that the weight of the head and upper part of the trunk is transferred to the articulating processes of the diseased vertebræ, and will be likely to produce disease in them. Unquestionably this weight is transferred to the articulating processes; but they are healthy, and the bodies are diseased. Moreover, I have yet to learn that this transfer of weight ever *does* produce disease in the articulating pro-

cesses, or that the disease under consideration ever affects the pedicles or laminae, or, in short, anything but the bodies of the vertebrae, with the intervertebral cartilages. At any rate, I think we need give ourselves no needless anxiety about this anatomical and probably imaginary difficulty; at least until some one brings forward an advance on our present knowledge.

CONTRIBUTIONS TO DERMATOLOGY.

[Continued from page 313.]

Diagnosis.—To those who are not perfectly familiar with cutaneous eruptions the diagnosis of scabies is not always an easy matter; and yet a correct diagnosis is of the highest importance, not only as regards the reputation of the attending physician, but also because an erroneous decision may throw a whole family off their guard and cause all its members to be infected with the loathsome malady in question. And we could relate more than one instance where a physician has lost desirable family practice in consequence of mistake in regard to this disease.

The sulci or furrows which are the characteristic mark of the presence of the acarus, may often be detected on the buttocks, on the lateral surfaces of the fingers, or on the inner margin of the wrists, and in young children on the inner edge or border of the feet. These furrows or cuniculi are more frequent in the papular form of scabies, than in the vesicular or pustular varieties. The desirableness of finding the cuniculi, acari and their ova, is admitted; but it sometimes—indeed we may say it frequently happens, that neither the one nor the other can be detected, especially when the eruption has become chronic and chiefly pustular in character; and the diagnosis must be established by considering its locality, its history, its present appearance, and in ascertaining whether there is evidence of its contagiousness or otherwise.

The eruptions with which scabies is likely to be confounded are eczema simplex, lichen simplex, and prurigo.

Eczema simplex presents vesicles more flattened, and clustered together, and less acuminate and less discreet than those of scabies. The pruritus in the two diseases is very different. In eczema it amounts to a painful smarting sensation; and scratching does not relieve, but rather augments it: whereas in scabies the sensation is not altogether unpleasant, and a thorough application of the nails is an efficient and delightful remedy.

Lichen simplex always attacks the dorsal aspect of the hands, arms, and legs, and never appears in the inter-digital commissures. The papules are exceedingly small and are generally closely grouped together, which is rarely the fact with scabies. The papules of lichen are of the color of the skin and produce but very little itching. In

young children and in adult females with soft tender hands, the eruption of scabies is very often seen in the palms:—there will be, perhaps, some half a dozen vesicles or large and flattened pustules scattered here and there in this locality.

Prurigo is also a papular eruption developed in places exactly opposite to those attacked by the itch. When the papules of prurigo are torn by scratching, little black scabs are formed on the summit; whereas the scabs in scabies are merely thin yellowish scales loosely attached to the parts beneath.

A peculiar rough scaliness or desquamation of the epidermis in the immediate vicinity of the eruption of scabies is a fact spoken of by some dermatologists, by others not. When the eruption is seated on the hands, this furfuraceous condition is most observable in the space between the thumb and index finger. The same appearance of the cuticle is exhibited when the disease occupies the elbow, the inner border of the axillæ, or the loins. The condition of the surface here referred to is produced by the repeated efforts of the parasites in their search after food and shelter. We have often observed it in chronic cases, and have directed the attention of those who were in a position to examine several cases of scabies daily for a long period, to this diagnostic mark. They have fully confirmed the observations of Prof. Wilson and our own in regard to this point.*

By most dermatologists the physician is taught how to extract with a pin or needle the acarus from its retreat in the little mound at the terminus of the furrow which it cuts through the epidermis, and how to transfer it to a glass slide for microscopical examination, and thus determine with certainty the nature of the eruption. This procedure is truly scientific; but let us see to what extent it can be reduced to practice. Probably not one physician in forty in this country is the owner of a microscope, so that to the great mass of the medical profession all directions given for obtaining the parasite as the essential element in diagnosis are, for all practical purposes, a dead letter; and other methods of identifying scabies must be employed; and in our opinion there is none superior to an exact knowledge of the several cutaneous affections particularly mentioned a moment ago. This knowledge is always available, whether the physician is at home in his office or abroad among his patients; and with it he never need falter in arriving at a differential and correct diagnosis. The microscope long since performed a valuable service in revealing the cause of scabies; but it does not describe the eruption itself; and unless physicians generally acquire the ability to recognize the disease independently of this instrument, is it not truth to say they never will be able to recognize it?

In very chronic cases the eruption of scabies sometimes covers the entire cutaneous surface; in young infants including the scalp. Where

* Naylor and Caillault make mention of the same peculiarity of the skin in connection with scabies.

the complaint occupies such extensive ground, the papular form is usually developed on the scalp, the back, abdomen, and upper portion of the extremities. On the hands, fore-arms, feet, ankles and buttocks, the disease is vesicular or pustular, or more frequently both. Occasionally a few pustules appear on the inner aspect of the thighs. Here, as well as elsewhere, they acquire a much larger size and are more distinct than those of impetigo, and they push higher upward, above the adjacent surface. Where the disease has continued unchecked for a long period in young subjects, the whole of the hands and fingers is completely covered with the eruption, and they become badly swollen and painful, the patient being scarcely able to bend the fingers. Sometimes little abscesses form on various portions of the surface during the existence of scabies as a consequence of the excessive irritation which this disease produces. Sometimes the eruption seizes upon the front of the elbow joint as a principal locality and where the delicacy of the cuticle offers facilities for the parasite to take lodgings. So in like manner the nipple of the female is occasionally the seat of the disease, while perhaps other parts of the surface are nearly free from it. The skin around the base of the nipple becomes excoriated and quite painful, and a slight discharge takes place. The eruption in this locality is usually of a vesicular character.

Treatment.

We shall consider somewhat briefly this point of our subject; contenting ourselves with the indication of those remedies which seem to be most efficacious, and which are least objectionable and expensive to the patient.

Alkalies form the base of nearly all the parasiticides in use for the cure of scabies. They are the most reliable, the safest and least obnoxious to all parties. Sulphur has been regarded as a specific in this disease; but as it is in nearly all cases combined with lard and potash or some other alkaline ingredient, the inferences drawn from its use are not wholly conclusive as regards its curative agency.

Alkalies not only act upon the epiderma, and destroy and remove its superficial portions, but are among the most deadly parasiticides which have yet been discovered. They are cheap, cleanly, and always at hand whenever needed. Nearly all the valuable preparations, whether ointments, lotions, or soaps, in use for the treatment of scabies, contain an alkali in some form or other. The famous pomade of Helmerick contains the subcarbonate of potassa; the lotion of Vlemineckx, of Brussels, used in the Belgian army, and afterwards endorsed and recommended by Prof. Hebra, of Vienna, contains caustic lime, and is in fact a penta-sulphide of calcium; and Wilkinson's ointment has as one of its principal ingredients the common black soap, or *sapo viridis*, which is used for domestic purposes throughout Germany. In our own country we have a soap much superior to the

above in its detergent and other qualities. It is commonly made, in the rural districts, from the ley obtained from the ashes of the hard varieties of wood; and consequently contains potash in combination with fat or grease. This soap is used by the masses for the ordinary purposes of ablution, and is seldom followed by injury to the skin. It removes the unhealthy cuticle; and is perfectly destructive to parasites of all descriptions.

A few years since, at our suggestion, Dr. Howard F. Damon, then Superintendent of the Boston Dispensary, instituted a series of extensive trials with this remedy, for the cure of scabies. The disease was then fearfully prevalent among the poorer classes, being brought home by soldiers on their furloughs from the Union armies. Probably at no time was there ever a better opportunity among us for the trial of such a remedy as this. From the *several hundred* cases thus treated, Dr. Damon reports to me the most satisfactory results. In no instance has he known this remedy to fail when it has been thoroughly applied; and rarely, if ever, is there any eczema in consequence of the application of the common domestic soft soap to the skin, in the treatment of scabies. After a fair trial of this article, Dr. D. concurs with me fully in the opinion that it is in several respects superior to the parasitocides now in use, and no remedy is cheaper or more ready at command. The proper mode of applying it is as follows:—Suppose the hands, wrists, &c. to be the parts involved in the eruption. The patient is to rub upon them about a common table-spoonful of the soap, using brisk friction at the time. Let the soap remain on until it produces a pretty severe smarting or tingling sensation. It may then be washed off with warm water, and the parts wiped dry. The same process is to be used for any part of the surface if necessary. Sometimes one application is sufficient; sometimes two or three may be required and may be repeated every third or fourth evening. These will be enough to cure all ordinary cases. If the eruption is very extensive it will be prudent to subject only a part of the diseased surface to the action of the soap at any one time. For instance, the hands and arms at one time, and the next time the legs or a portion of the trunk of the body. There is quite a difference in individuals in regard to the length of time they can allow the soap to remain on comfortably to themselves. Those of peculiarly nervous temperament or very delicate skin can tolerate it only a few minutes, while others can bear it two or three hours before washing it off. For infants and very young children an ointment containing from ten to fifteen grains of the iodide of potassium to the ounce of lard, and applied every second or third night, is a perfect parasiticide in scabies. In recent cases a single application is often sufficient.

The Vleminecx solution cures the itch very rapidly, although it is a disagreeable remedy and very harsh for the delicate skin of females and young children. It is prepared in the following manner. Put

℥ ij. of sublimed sulphur and ℥ j. of quick lime into ℥ xx. of water. Boil down to ℥ xij. Stir the ingredients with a stick while boiling. Filter. The patient dips a brush made of bristles into the fluid and proceeds to paint the affected skin. As the fluid dries on, it leaves the surface of a yellow color from the powder which is deposited. The powder may remain undisturbed upon the skin for two, three or four hours, unless the smarting and pain become too severe. Of course it can be washed off at any time, if the patient is unable to bear it. One application is frequently enough. If its caustic action or that of the soft soap renders the skin raw or very tender, equal parts of glycerine and water, or a little cold cream can be smeared on.

I propose to close this article with the following quotation from a brief communication in a late number of the *London Medical Times and Gazette*:—

"To establish a new colony, it will not suffice that a male acarus, however potent in himself, should step across from one person to another, nor that an unimpregnated female should alone. They must go in pairs, like the animals into Noah's ark, or else the race cannot be perpetuated. But imagine a single pregnant female crossing, and the thing is done. As soon as she brings forth her litter the colony has begun. But the acarus is not adapted for these Leotard-like feats, and the pregnant female is always deep in the epidermis, tunnelling her way on, and laying her eggs as she goes. Now, as she tunnels, she, like all other engineers, makes air-holes through to the surface of the epidermis (these may be readily seen through a weak lens). Through these the young acari, when hatched, escape, to settle in some more or less distant part of the skin, if not disturbed before they are hatched. But the unhatched ova are a dust as fine as the pollen of a plant, and if the moist skin of the infectee only touch the skin of the infector, which is pierced with these little pores, which are full of half extruded ova, several of them are sure to stick to the infectee's skin, and so (*nefundum dictu*) he catches the itch."

[To be continued.]

CARBOLIC ACID AND ITS COMPOUNDS IN SURGERY.

By Sir J. Y. SIMPSON, Bart., M.D., D.C.L., &c.

THE communication on the antiseptic properties of carbolic acid which Professor Lister published in the *Lancet* of the 21st of September, was originally read by him at the meeting of the British Medical Association in August last at Dublin. In the discussion which followed, Dr. Hingston, the able and accomplished Professor of Surgery in the McGill College of Montreal, stated to the Surgical Section that, in travelling last summer over the Continent, he had found that the use of carbolic acid in surgery was now being

discontinued in places where formerly it was in vogue; while in Great Britain he had seen it poured into and over the surfaces of recent amputations and other wounds, in the form of a fluid ointment or combined with oil, in a way which recalled to his mind the olden and reprehensible system of dressing with some foreign body the whole raw surfaces of recent wounds—a practice that was followed two or three centuries ago, and which he fondly imagined was forever banished from scientific surgery.

On the same occasion, amongst some other remarks, I stated that—contrary to what Professor Lister seemed inclined to maintain—carbolic acid had been used for some years past in surgery in France and Germany, and that his use and applications of it, and his theory of its mode of action, were not in any way original.

Professor Lister, in the *Lancet* of Oct. 5th, appears to speak of such simple truths as “unworthy cavils.” Dr. Hingston is quite able to defend his own statements, if he thinks it worth his trouble to do so. But let me here take the liberty of briefly pointing out that Mr. Lister has been most undoubtedly preceded by other authors in all his leading theories and uses in connection with this subject. * *

Mr. Lister remarks (the *Lancet*, Sept. 21st, 1867) that when it had been shown, by the researches of Pasteur, that the septic property of the atmosphere depended on minute living organisms suspended in it, “it occurred to me,” to use his own words, “that decomposition in the injured part might be avoided, without excluding the air, by applying as a dressing some material capable of destroying the life of the floating particles. Upon this principle I have based a practice.....The material which I have employed is carbolic or phenic acid, a volatile organic compound, which appears to exercise a peculiarly destructive influence upon low forms of life.”

Now the very same theory, the very same practice, and the very same means of reducing that theory to practice, have all been worked out and published on the continent years ago by Lemaire, Déclat, Küchenmeister, and others. The strongest averments cannot alter the simplest dates, and I fear that it will not redound to the credit of English surgery to claim what most certainly does not pertain to it. * * * *

Mr. Lister has hitherto chiefly or only described, I believe, three kinds of surgical complications in which he has employed carbolic acid—namely, (1) in compound fractures, (2) in suppurations, and (3) in wounds. In all of these points he has been long forestalled by the experience of our continental neighbors. * *

Mr. Lister, in his letter to the *Lancet*, Oct. 5th, states that “all his recent visitors to the Glasgow Royal Infirmary had viewed his treatment of wounds, abscesses, compound fractures, &c., with carbolic acid, as original.....Not one,” he adds, “had ever expressed the slightest doubt that the system in question was *entirely new*.” While I regret the strange and almost incomprehensible want of

knowledge with which Mr. Lister charges his professional visitors, I am, fortunately, not answerable for it; and if Mr. Lister had taken the slightest trouble to search English medical literature alone, he would easily have convinced himself of his own grave error in this respect. I think most, if not all, the medical and therapeutic journals of England have alluded more or less to the subject during the last six or seven years. Mr. Lister has published all his professional papers in the *Lancet* and the *Edinburgh Medical Journal*, and is, therefore, it is to be fairly presumed, acquainted more or less with the surgical papers and announcements contained in these two periodicals at least. In both of these journals he will find the matter brought under the notice of the surgical profession within the last six or seven years. * * * *

One great and most laudable object which Professor Lister evidently has in view in using carbolic acid as a local dressing to wounds is to close these wounds entirely by the first intention, and without any suppuration; so far, by this means, averting the mischances of surgical fever. But these paramount objects have been attained in the hospital of Aberdeen by the use of acupressure. In the Surgical Section of the Association to which Mr. Lister read his paper in Dublin, Dr. Pirrie, of Aberdeen, stated that, for example, out of twelve cases of excision of mammary tumors treated with acupressure in his practice during the last two or three years, eight out of the resulting wounds had closed entirely by the first intention, and without the formation of a single drop of pus. In relation to these "magnificent" results—to use Mr. Lister's expression—I would beg to ask him if even a single case of such mammary wound, treated with ligature, healing up without a drop of pus, ever occurred in the hospitals of Glasgow or Edinburgh since the day of the first institution of these hospitals up to this time? Has Professor Lister met, in the Glasgow Hospital, with one single case of such primary union after excision of the mamma, even when the ligature and carbolic acid were both employed? And if so, why do he and others persevere in rejecting a practice which in another hospital has led to the cure of two-thirds of all such cases by entire and complete primary union?

Bibliographical Notices.

The Physiology of Man (Alimentation, Digestion, Absorption). By AUSTIN FLINT, Jr., M.D. New York: D. Appleton & Co. 1867. 8vo. Pp. 556.

THIS volume, handsomely and clearly printed on excellent paper, is the second of a series in course of preparation, intended to embrace all the subjects usually regarded as belonging to human physiology. We have found the style easy, lucid, and, at the same time, terse.

The practical and positive results of physiological investigation are succinctly stated, without, it would seem, extended discussion of disputed points. As a specimen of the style, we make the following extract from the eight pages and a half devoted to the general statement of the effects of alcohol upon the system.

The ingestion of a moderate quantity of alcohol retards the destructive assimilation of the tissues; for the diminution in the quantity of the excretions in the experiments of Hammond was too long continued to admit of the theory that the effete products were simply retained in the blood and not removed by the proper organs.

It is also demonstrated that when the system is so nourished that the weight is stationary, the moderate ingestion of alcohol, for a short time, will cause an increase in weight corresponding with the diminution in the quantity of the excretions; with, however, some disturbance of the general health and the mental faculties.

The loss of weight consequent upon insufficiency of food may be temporarily arrested and the unpleasant symptoms relieved by the use of alcohol in moderate quantity.

The gain in weight following over-ingestion of food is increased and the disturbance of the system aggravated by the use of alcohol.

If the observations showing the elimination of alcohol from the system be taken as conclusive, it is evident that this agent influences nutrition in its passage through the organism, and that its immediate effects are of a transitory nature. It cannot be considered as an alimentary principle, or as capable of supplying the place of articles which are actually assimilated.

On the subject of insufficient alimentation, the accounts collected by the United States Sanitary Commission of the sufferings of our soldiers in Southern prisons are laid under contribution to the cause of science. "Through the kindness of Prof. W. H. Van Buren, of the United States Sanitary Commission, we have been enabled to make use of a MS. report to the Richmond authorities (now the property of the Commission) on the condition of the United States soldiers, prisoners of war at Andersonville, by Prof. Joseph Jones, of Augusta, Georgia." In his Preface, the author says:—"Such an opportunity for observing the effects of improper and insufficient alimentation upon large bodies of men has never been presented before, and probably will never occur again." We trust not!

The topics treated of in the present volume are—Hunger, Thirst and Inanition; Alimentation; Compound Alimentary Substances; Drinks—Quantity and Quality of Food; Digestion—Prehension and Mastication; Insalivation; Deglutition; Stomach-digestion—Gastric Juice; Action of the Gastric Juice in Digestion; Movements of the Stomach; Intestinal Digestion; Pancreatic Juice; Action of the Bile in Digestion—Movements of the Small Intestine; Action of the Large Intestine; Absorption; Imbibition and Endosmosis; Lymph and Chyle.

Essentials of Principles and Practice of Medicine. A Handy-Book for Students and Practitioners. By HENRY HARTSHORNE, M.D., Professor of Hygiene in the University of Pennsylvania, &c. &c. Philadelphia: Henry C. Lea. 1867. 12mo. Pp. 417.

This little book is handsomely gotten up, clearly and ably written, and presents some original views of the author. But, we hope to be excused for entertaining the notion that the student, as well as the young practitioner, instead of relying on any abridged compendium

of theory and practice, would do better to note down, in his hospital walks, or rounds of visits, points on which he may require light, and refer at once to the full-grown treatises of Watson, or Bennett, or others.

Massachusetts General Hospital.

[Surgical Operations for the week ending December 8th. Reported by C. B. PORTER, M.D.]

1. *Staphyloraphy, with result.* By Dr. R. M. HODGES.—Patient was a girl, 17 years of age. There was fissure of the soft palate up to the palate bone. The operation, by the usual method, was performed on Friday, Nov. 29th, seven sutures of benzoinated silk being introduced. On the following Tuesday, the sutures were all removed, and four days later the patient was discharged from the hospital, with the fissure completely closed by a cicatrix hardly noticeable.

2. *Amputation of Arm.* By Dr. H. J. BIGELOW.—This patient, an adult male, had undergone amputation of the forearm, just below the elbow, four months previous, the forearm having been crushed, with a badly comminuted fracture of the humerus. It was then decided in consultation to remove the arm just below the elbow rather than at the shoulder-joint, the operation being done by Dr. Gay, and followed, at the time, by an excellent result. The patient had returned to the hospital with a swollen, cedematous and painful stump, with ulcerated extremity. During a three weeks' residence in the hospital, the ulcer had healed and the edema subsided. The stump is red, shining, and especially tender at one point of the cicatrix. The pain had steadily increased, shooting up the arm, in the course of the nerves, nearly to the shoulder. The inflammation was evidently aggravated by the proximity of the joint, which seemed to be also involved. In view of the neuralgic pain and of the inflamed joint, the arm was amputated just above the elbow. The median and ulnar nerves were drawn out from the stump and excised to the length of two and a half inches. The part of the arm which was removed showed, on dissection, both the median and ulnar nerves terminating precisely at the tender point of the cicatrix, in which they were involved, the former showing the usual bulb three fourths of an inch above. The articular surfaces of the joint were undergoing transformation, while the bones were adherent.

3. *Removal of Supernumerary Thumb.* By Dr. S. CABOT.—The patient was a man, with no other supernumerary part on hands or feet. This was attached to the first phalanx of the thumb at about its middle, with one joint as usual between the first and second phalanges of the thumb. It was removed at its articulation with the thumb.

4. *Parotid Tumor (recurrent).* By Dr. H. J. BIGELOW.—Patient was a married woman, 63 years of age. The tumor, which was recurrent, had been removed ten years previous, and was then about the size of a goose egg, and of ten years duration. The present tumor, not quite so large as the former one, was situated just anterior to the cartilage of the ear, and had been rapidly growing for the past year, and was quite painful. A slightly curved incision was made over the tumor, from above downward through the integuments, and the tumor exposed. By careful dissection, the tumor was with some difficulty removed, owing to its being developed in the cicatrix resulting from the removal of the first tumor. Considerable hæmorrhage from the wound was controlled by ligatures and the wound closed by sutures. It proved to be the usual benign tumor of the parotid region, originally developed in the substance of the gland, and consisting of fibroid tissue intermixed with enchondroma.

5. *Hydrocele.* By Dr. S. CABOT.—Tumor was about the size of a small cocoon, of the usual shape, but the testicle, instead of being behind was high up and in front. The trocar being introduced, only a part of the fluid was evacuated, owing to the existence of two sacs. The contents of the second sac could be

pushed through the external abdominal ring, but would slowly return on pressure being removed. There being some doubt with regard to the diagnosis, further operative procedure was deferred.

6. *Lipoma of Hip.* By Dr. H. J. BIGELOW.—The patient was a woman, 37 years of age. The tumor, situated just below the crest of the ilium of the right side, was of three years' growth and of the size of an egg, and had been growing rapidly the past year. An incision, three inches in length, being made over the tumor, it was enucleated with the greatest ease by pressure, the knife not being used.

7. *Necrosis of Rib.* By Dr. S. CABOT.—Patient, an adult male, entered the hospital one year previous with a large abscess over left hypochondriac region, which was opened; carious bone was felt at the bottom of the sac, and the patient soon left the hospital with a fistulous opening, which has remained up to the present time. On examination with the probe, rough, denuded bone was felt, and removed by a burr-drill.

8. *Necrosis of Humerus.* By Dr. H. J. BIGELOW.—This patient was a boy 17 years of age, who, two years before, had had typhoid fever, from which he had very slowly convalesced. About a year afterwards he had great pain in and swelling of the arm, followed by abscesses and fistulous openings over the head of the humerus and the outer condyle, communicating with diseased bone. *Operation.*—An exploratory incision was made over the head of the bone and another near the elbow-joint, both in the neighborhood of fistulous openings. The upper part of the shaft was found to be seriously diseased, as was also the case at its lower extremity, where the joint was also probably involved. There being no loose bone to be removed, and the patient being so weak as to render amputation somewhat hazardous, further measures were deferred in order to consult the patient's friends.

9. *Lipoma of Hip.* By Dr. H. J. BIGELOW.—Patient was a man aged 59 years. The tumor, of twenty years' growth, was situated in the upper part of the right gluteal region, extending from the anterior superior spinous process of the ilium backwards to within two inches of the vertebral column, and downwards to the trochanter major, measuring at its base twenty inches in circumference. Patient being etherized, a long, thin amputating knife was thrust through the tumor at its base and made to cut its way out, the tumor being cut in halves, which were easily peeled from their bed, with the exception of a few adhesions which had been contracted with the skin, and were readily dissected away with the knife. A few small vessels being tied, the wound was closed by sutures.

10. *Operation for ruptured Perinæum.* By Dr. S. CABOT. This patient was a married woman, aged 34 years. Fourteen years ago, at the birth of her first child, which weighed eleven pounds, there was a complete rupture of the perinæum, extending up through both sphincters. The patient had no control over her evacuations, and of late had been suffering with almost constant diarrhœa. She had given birth to three children subsequent to the rupture. Twelve years ago, she had an operation performed in the country, though without success. *Operation.*—The cicatricial tissue resulting from the rupture of the old perinæum was first carefully dissected away, and the skin and mucous membrane on both sides, to the extent of about one and a half inches long and three fourths of an inch wide, the dissection commencing at the margin of the anus and extending upward. The edge of the recto-vaginal septum was then refreshed, removing about one fourth of an inch in width of the vaginal surface. The parts were then brought together by three pairs of needles; the first pair, being introduced about one third of an inch outside of the refreshed surface at the margin of the anus, were passed at this distance from the raw surface through the soft parts involved, emerging at one fourth of an inch from the refreshed margin of the posterior vaginal wall, and thrust deeply into a cork in such a manner as to stand parallel to each other and hold the raw surfaces in contact. Two other pairs were similarly introduced higher up, and converging to the same cork. Superficial stitches were placed one between each pair of needles, two at the fourchette, and one deeper, half way between the upper pair of the needles and the fourchette. The needles were then fastened together in pairs by a ligature

passed around them, and prevented from contact with the skin by pieces of cardboard and lint.

11. *Tenotomy.* By Dr. H. J. BIGELOW.—Patient was a boy. A case of exaggerated equinus. The plantar fascia was subcutaneously divided.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 12, 1867.

LEGAL RESPONSIBILITY OF EPILEPTICS.

A RECENT occurrence in Philadelphia has brought up the question of the moral accountability of persons habitually epileptic, in a manner calculated to direct the attention of the medical profession to this important subject with new interest, to lead, we hope, to valuable results. Dr. Isaac Ray, in an article on the subject published in the *American Journal of Insanity* for October, has given an account of the circumstances and discussed the questions involved, in his usual lucid and philosophical manner.

The facts of the case are briefly these. On the third of May last, George W. Winnemore was convicted in Philadelphia, before the Court of Oyer and Terminer, of the murder, on the 25th of April, of Dorcas Magilton. The unfortunate woman was found by her husband, on returning home after an hour's absence, with her throat cut, quite dead. The prisoner, who was an intimate friend of the family, admitted him to the house, saying that he had just come in, and found her in this condition. The evidence against the prisoner consisted of very few facts. A razor, identified as his, was found in the privy, two bank bills of two dollars each were in the pocket of the deceased the day before, and two bills of two dollars each were found in the prisoner's pocket. Two witnesses who had been looking from their windows towards the house for half an hour previously, contradicted his statement that he had come in only a few minutes before. In their defence, the prisoner's counsel contended that it was impossible to identify so common a thing as a razor, of which hundreds of thousands might be made after the same pattern; and that although the bills in his pocket were of the same value as those in the possession of the murdered woman the day before, their exact identity was not established; and, furthermore, that he was not pressed for money, and could easily have obtained it from a brother if he had needed it. The prisoner was shown to have been the victim of epilepsy from two or three years of age until he was ten or eleven years old, sometimes having thirty or forty fits in a day. Full evidence of his having been liable to fits subsequent to boyhood was not obtained until after the trial. The whole trial, however, seems to have been managed without a proper regard for the rights of the prisoner, and the question of his accountability to have been almost wholly ignored. The prisoner was arraigned eight days after the homicide was committed, counsel were assigned to him who had never seen him before, and who knew nothing specially of the case. They were compelled to come to the trial after only two days preparation, they were obliged to depend on chance for the witnesses that might appear, without any settled plan of defence or opportunity of consulting

experts—who, if they had been called in, would have had no chance to examine the condition of the prisoner—much of the medical testimony was excluded, and evidence of the highest importance came too late, although the utmost despatch was used to obtain it. In this way, the evidence of the surgeon of his regiment that he was an epileptic, and was discharged from the service on that account, was excluded, although on its way as fast as the United States mail could bring it.

The reason given for hurrying through the trial with such precipitancy was, that the public good required that so foul a crime should meet with speedy retribution. The same spirit prevented a favorable answer to the prayer of the counsel for a new trial, and perhaps influenced the government in their consideration of the report of a committee of medical gentlemen, who visited the prisoner at the request of the counsel, a few days before his execution, and made an examination of his mental condition.

It was in evidence in the course of the trial that the prisoner had always been a quiet, inoffensive, well-disposed young man, who never had been guilty of a crime. He was a firm believer in what is called spiritualism, and was subject to the most extraordinary vagaries, which often put his mother and sister in bodily fear. Twice he had made attempts on his own life, and an uncle had committed suicide.

We are obliged to run over this interesting paper of Dr. Ray's in the most cursory manner, and have no room to refer to many of the extenuating circumstances brought out by him. We cannot forbear, however, to give our readers the document referred to above, testifying to the condition of the prisoner after conviction; it is given in the form of a petition to the Governor.

To his Excellency, JOHN W. GEARY:

The undersigned, all of whom have been engaged for many years in the care of the insane, have, this day, at the request of Damon Y. Kilgore, had an interview with George W. Winnemore, and in consequence thereof, beg leave to make the following statement:

Winnemore now, and probably for some time past, shows indications of an abnormal state of mind; of a mental condition which may be attributable to the epileptic fits to which he has been subject from infancy. In regard to its degrees and kind, we feel unable to speak exactly, because one interview, though prolonged to between two and three hours, was not sufficient for the purpose.

We would also state, that epilepsy, especially when of long duration, oftener than otherwise impairs the mental powers, sometimes in one way, sometimes in another, and therefore, whenever an epileptic is charged with crime, nothing less than an exhaustive investigation of his history and of all the circumstances of the case, can remove the suspicion that the crime may have been committed in one of those abnormal conditions that are so often the sequel to epilepsy.

In consideration of these facts, therefore, we respectfully pray your Excellency to stay his execution for a few weeks, in order that a deliberate scientific investigation of Winnemore's case may be made by the undersigned.

ISAAC RAY, M.D.,

Late Superintendent of the Butler Hospital for the Insane at Providence, R. I.

J. H. WORTHINGTON, M.D.,

Superintendent of Friends' Asylum for the Insane, Philadelphia.

J. PRESTON JONES, M.D.,

Assistant Physician Penn. Hospital for the Insane.

These gentlemen speak of the prisoner as a young man of a quiet, ingenuous manner and cheerful expression. He protested his innocence most emphatically, but expressed himself as willing to die, as he was to be sacrificed for some wise

and good purpose known only to God. The prayer of their petition, however, was not granted.

We cannot follow Dr. Ray in all the interesting particulars which he gives of this unfortunate young man's physiological condition, but must be content with a brief extract from his argument upon them, and his statement of the impressions which the facts made upon him.

Whether from hereditary predisposition or not, it is obvious that the prisoner was born with a nervous system strongly inclined to morbid manifestations. One of these, which actually made its appearance at a very early period, was epilepsy, which of all the forms of cerebral disorder, stands among the gravest. Coincident with this, either as a direct effect, or a collateral result of the original nervous defect, there appeared in childhood instances of unconsciousness, which, pathologically considered, may be affiliated to somnambulism and catalepsy. [A state of mental unconsciousness, not syncope, previously described, which lasted several hours at a time, and in which he did acts which he had no knowledge of afterwards.—Ed.] And these continued to occur through the latter years of his life, though not perhaps in so well-marked a form. It could hardly have been expected that his intellectual operations would entirely escape from the influence of this abnormal condition of the nervous system. Hence his distaste for exact and practical knowledge requiring continuous attention and effort, and his fondness of reverie and dreamy speculation, which needed neither discipline nor preparation. * * * *

For legal purposes it might seem necessary to separate the epileptic element from the rest, and ascertain the precise amount of its influence upon the moral character and conduct. But the elements of nervous disorder were too long and too intimately associated together to allow of this. Even under very different circumstances the effect of epilepsy on the mental manifestations is often determined, somewhat, by the training and habits of the individual. Not to the same extent, certainly, that mania is, but enough to be taken into the account in any psychological estimate of its consequences. In this case it may have had the effect of rendering his notions on certain subjects still more extravagant and remote from the line of common belief than they would otherwise have been. Whether or not it ever produced delusions, is a point on which the evidence is not very clear. His spiritualistic experience was that, for the most part, of thousands of other people never supposed to be insane, and yet it is difficult to draw the dividing line between this kind of experience and downright insanity. * * * *

Spiritualism in any shape is a matter of temperament rather than a deduction of evidence and reason, and thus is furnished an additional proof that Winnebago was endowed with a nervous system peculiarly liable to abnormal activity. I do not mean to convey the idea that the facts of spiritualism are entirely the creation of fancy or of fraud. Many of them are susceptible of proof, and are attested by evidence that places them beyond a reasonable doubt. They indicate the existence of agencies, certainly, that have not yet been admitted into the philosophy of the schools. It is to be regretted that the prevalent tendency is to ignore them entirely, rather than to make them a subject of scientific investigation. It is surprising that physicians, especially, with such well recognized affections before them as catalepsy, somnambulism, ecstasies and double consciousness, should jump to the conclusion that all the facts of spiritualism and animal magnetism are utterly anomalous and impossible.

Winnebago's notion about his being a victim, which might seem, at first sight, to be a genuine delusion, was, probably, only a rational notion carried to the utmost verge of extravagance. When his innocence should be proved hereafter to the satisfaction of everybody, as he believed it would, the consequence would be an utter change of popular opinion on the subject of capital punishment, and thus he might regard himself as a sacrifice offered up for the good of humanity—not merely as a martyr whose blood, in the ordinary and regular course of events, would become the seed of a great benefit, but as the favored child of a magnificent destiny prepared and arranged in the councils of the Almighty.

Dr. Ray, in conclusion, seems to incline to the opinion that Winnemore, if guilty, did the act in one of those states of unconsciousness to which he had been subject, but which were not testified to at the trial. He closes his paper as follows:—

In view of what we already know of epilepsy and of what still remains to be learned, we have a right to require the utmost circumspection and the closest investigation whenever the legal liabilities of epileptics are in question. The fact of its existence being established, is it going too far to say that legal responsibility is presumptively annulled, and that the burden of proof lies on the party that alleges the contrary? People are scarcely ready for it yet, perhaps, but to that complexion will they come at last.

We lay this hasty sketch of this most painful case before the profession, in the hope that it may direct their minds most seriously to the important medico-legal questions which it contains. The evidence of the medical men summoned as witnesses seems to have been of the most unsatisfactory character, and worse than useless. Dr. Ray's paper should be read by every one who has the misfortune to be called to testify in such a case.

DR. J. STEDMAN of Jamaica Plain suggests, in a note to us, as a convenient apparatus for inflating the lungs in cases of asphyxia, the double-bulb apparatus used for atomization, fitted to the nozzle of Codman & Shurtleff's nasal douche instrument. In this way pure air can be forced into the lungs of the asphyxiated person, instead of air partially vitiated, as it would be if blown through a tube by the mouth. He also suggests the use of the bulb apparatus for inflating air-pessaries, and for distending the bowels with air in cases of intestinal obstruction.

With regard to the first suggestion, which we had in our minds at the time we wrote the article on Resuscitation of Asphyxiated Persons, it is undoubtedly a good one, but the difficulty would be to have the instrument at hand at the moment when it is wanted. In these smoking days, some kind of a tube cannot be far off under any circumstances; and although air blown from the lungs of the operator is not so pure as that which has not been inhaled, yet practically it cannot be much vitiated if he takes a full inspiration before commencing the process. We had already applied the proposed apparatus for the second purpose suggested. It would, undoubtedly, furnish an excellent form of bellows for the third.

A Generous Offer.—Why our profession does not write more for the journals is a question we have seen canvassed of late in our exchanges. It is believed that much of scientific value is lost to the reader, through the backwardness of practitioners to steal time from their laborious duties to contribute to the periodical literature of the day. But the subject is now approached in a different manner, and solely with a view to the advantage of the contributor himself. A medical friend (whose liberality has become almost an every day affair), feeling the importance to the younger members of the profession of committing their ideas and observations to paper, makes the following offer. He will cause the Boston Medical and Surgical Journal to be sent, for one year, and free of expense, to practitioners of not more than ten years standing, who may write for the Journal, one original article each, of not less than three (3), nor more than six (6) printed pages, on any subject of current practical or professional interest;—the articles to be accepted by the Editors of the Journal, and the number of the representatives of "young Physic" to be thus favored, not to exceed ten. Of course articles intended to compete for this distinction are, when sent in, to be so designated by their authors.

Diet and Health of the English and French Canadians.—In our issue of October 17th, we printed a statement, taken from the *Union Medicale*, and made at the recent International Medical Conference, by Dr. Kingston of Montreal, to the effect that the French Canadians eat much more animal food than the English, and are much less liable to pulmonary diseases. The *Canada Medical Journal* denies the truth of these statements and says:—

Comment on this point is unnecessary, as those acquainted with the facts as they stand are fully aware that the Canadian population of English, Irish, and Scotch descent are universally superior in physique and appearance to those of their French Canadian fellow colonists.

We cannot agree with the doctor in the other point at issue, viz., that pulmonary diseases are more frequent among the British and less so among the French population, as from experience we hold that diseases of the lungs are quite as prevalent with the one class as with the other. We only refer to this subject because we cannot allow a question having such important bearings on the salubrious character of our country to go unchallenged.

Phenic Acid in Surgery.—In Paris, phenique acid is, at present, king over all other remedial agents, and, as a surgical dressing, is particularly so with Maison-neuve. Charpie, saturated with a solution of this acid, is applied to every breach of continuity of surface by this doughty professor, and with the assurance in his teachings that it obviates nearly all the secondary surgical accidents. A tin wash-dish containing the inevitable embrocation, is a conspicuous object at every bedside, and by the side a small stack of charpie, from which, as he arrives, he snatches a handful, dabs it in the solution, and, with a vigorous hand, slashes it on to every variety of diseased or abraded surface, from vulva to remotest parts. He does not attempt union by "first intention," and this is true of all the Paris surgeons at the present time. * * *

At the Pitié, we find Désormeaux. His clinics are well attended and very popular. His hobby is, as you are aware, the endoscope. I had the pleasure of looking through it many times, as he is very obliging, and takes great pleasure in giving ample explanations of the method of using it. In his hands, it certainly performs all that has been claimed, and reveals the bladder and urinary passages wonderfully well. It must soon be an indispensable appendage to every surgeon's armament.—Dr. J. W. FREER, in *Chicago Medical Journal*.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 7th, 1867.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	54	43	97
Ave. mortality of corresponding weeks for ten years, 1856—1866	39.3	36.6	75.9
Average corrected to increased population	00	00	83.9
Deaths of persons above 90	1	0	1

ERRATUM.—On page 350, in our issue of Nov. 28, for "Herrick" read *Frerichs*.

MARRIED.—At South Reading, 3d inst., J. R. Mansfield, M.D., of New York City, to Miss Mary R., only daughter of Dr. William G. Skinner, of S. R.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 7th, 97. Males, 54—Females, 43. Accident, 1—apoplexy, 1—disease of the bladder, 1—hemorrhage of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 5—cancer, 1—consumption, 15—convulsions, 3—croup, 5—debility, 2—diphtheria, 4—dropsy, 3—dropsy of the brain, 2—dysentery, 1—epilepsy, 1—scarlet fever, 9—disease of the heart, 4—infantile, 1—jaundice, 1—congestion of the lungs, 4—disease of the lungs, 2—inflammation of the lungs, 8—menstrues, 2—paralysis, 2—peritonitis, 2—premature birth, 2—tonsillitis, 1—tumor, 1—unknown, 8.

Under 5 years of age, 47—between 5 and 20 years, 8—between 20 and 40 years, 19—between 40 and 60 years, 15—above 60 years, 8. Born in the United States, 71—Ireland, 17—other places, 9.